

# Planting in schools - defining your requirements – general information

## Introduction

Before planting commences, the requirements should be clearly defined to ensure the best outcome for the investment. Landscape planting can provide many benefits such as shade to buildings, reduction of indoor temperatures and power bills.

Shade from trees create a comfortable microclimate to outdoor spaces and plants provide opportunities to educate, for example science studies, animal and plant interaction such as caterpillars, basis for art lessons, caring for land and indigenous studies, and demonstrate sustainable land management practices.

Indigenous local plantings provides a habitat for native fauna and increases biodiversity values in the local area. Planting in the playground can inspire exploration, social interaction, learning and controlled risk taking for children. To optimise the benefits, the overall function and requirements should be carefully considered at the start of the project.

## Why are you undertaking planting

Careful consideration should be given to the purpose of the planting to ensure the best plant selection and landscape design. Use the following questions as prompts to help define your requirements:

- who will use of the space
- what is the intended use of the space
- what is the role of the planting, for example shade, colour, screening, amenity, aesthetics, habitat, educational or providing nature play opportunities within the playground
- is the planting to provide a specific function, for example identify and create interest to entry areas, define boundaries between facilities or play areas, providing privacy to specific buildings or classroom areas, directing the flow of pedestrian or vehicular traffic along paths and roadways.

## Other considerations

Landscapes and trees take time to develop and mature, they are living systems. This checklist will help refine the detail of your planting:

- what are the priority areas for planting
- are there existing trees that have high value and will be retained and protected. This may require a detailed assessment by an arborist or landscape architect
- how will the plants be maintained
- are there other works planned in the area that may impact on your planting. Sacrificial planting may be carried out if future development is many years away, or forward planting may be carried out if the nature of the development is known
- do you need a quick result, or is it okay for the planting to develop slowly over time
- are there any site constraints, for example underground and overhead services, safety and security including sightlines, microclimate, proximity to buildings and facilities, soils or rocks

- do you need to maintain good sightlines and clear visibility for reasons of safety, security or supervision
- are regular and emergency access routes clear and unimpeded
- do you have a set budget
- will the area be irrigated
- group plants with similar water requirements.

## Where not to plant

Plants and in particular trees, can cause problems when planted in the wrong location. To avoid problems down the track, consider the following.

### Do not plant over underground services

Underground services include power, water, sewerage, stormwater and telephones. Tree roots can cause stormwater, sewer and water pipe blockages that can cause interruption to services. Tree roots can cause damage to electrical and telephone services resulting in interruption to power and phone lines.

Keep tree planting at least 3.5 m away from underground services. Shrub, palm and groundcover planting may be acceptable over underground services as long as services are not damaged during planting and root systems are not invasive. Very large trees such as *Ficus* spp. (fig trees) and trees with vigorous root systems such as *Schefflera Actinophylla* (umbrella tree) and *Melaleuca* sp. (paper bark, honey-myrtles or tea trees) should not be planted within 30 m of underground services.

The Power and Water Corporation website provides information regarding planting on water and sewer easements including suitable plant species and planting specifications

### Be careful planting below overhead services

Do not plant trees that will encroach on the clearance zone around power lines. The clearance zone is 1 m around power lines and 1.5 m around high voltage power lines. Plant trees far enough from power lines so that if a fully grown tree blows over, it will not encroach on the clearance zone around the wires.

Shrub and groundcover planting is acceptable under overhead services provided they do not encroach on the clearance zone. Information regarding safety around trees and powerlines is available on the Power and Water Corporation website.

### Consider tree sizes when planting close to buildings, walls and other built structures

Small and medium trees should be set back minimum 5 m and large trees minimum 10 m. Very large trees such as *Ficus* spp. (fig trees) and *Syzygium forte* (white bush apple tree) should be planted no closer than 30 m to buildings, pathways or paved areas unless effective root protection is provided. These trees all have vigorous root systems that will seek out water. Tree canopies over buildings will drop leaves into gutter systems and potentially block them causing internal flooding.

In all cases, also consider the canopy spread to ensure the mature tree does not risk damaging the structure itself. Generally, all trees should be planted a minimum of 2.5 m away from paths and other paved surfaces. For large and vigorous trees, this should be 4 m. Small shrubs and groundcovers may be planted closer. These clearances described above may be reduced when trees are planted with correctly installed root barriers to a minimum of 600 mm depth.

## Where to plant

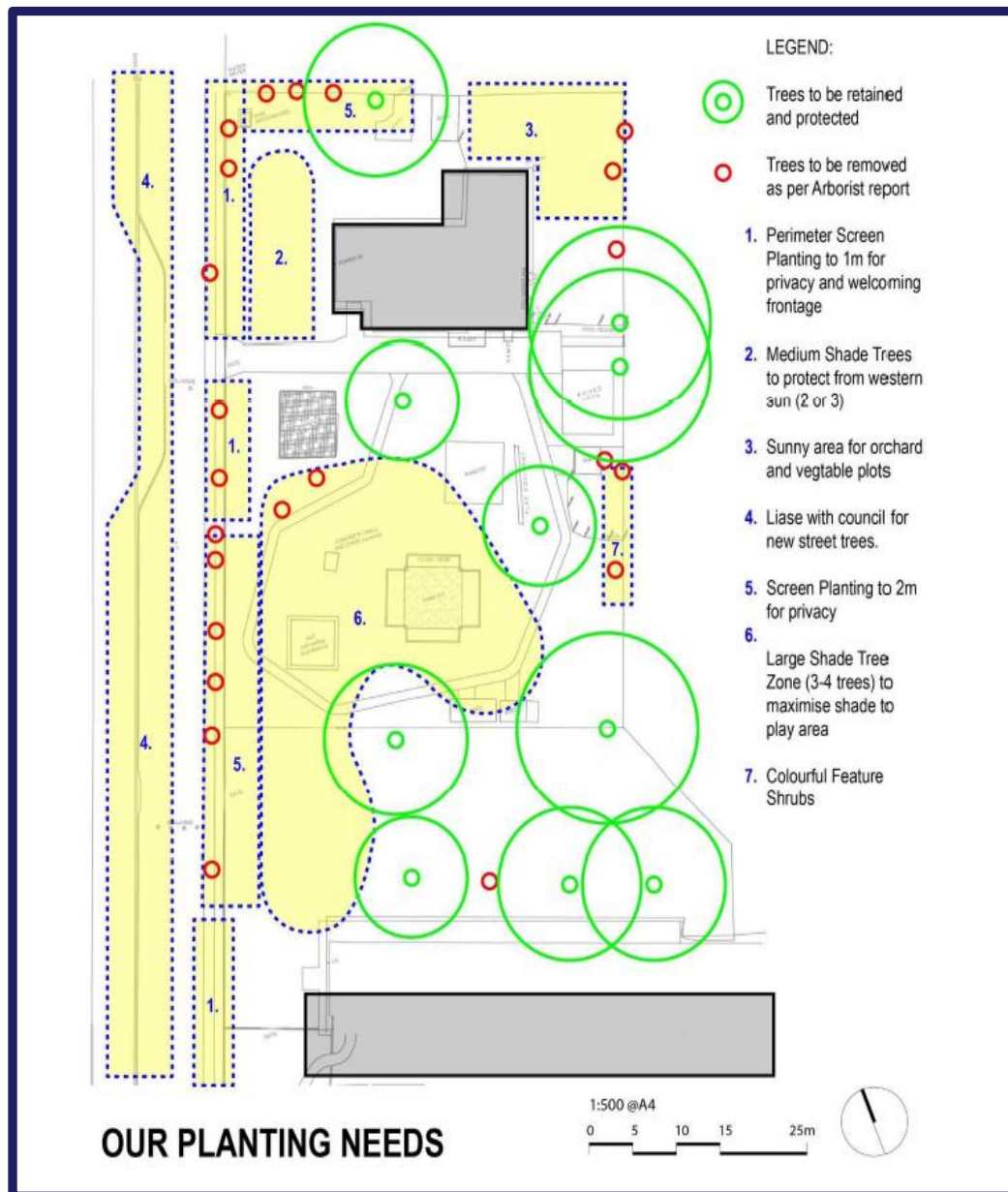
This table summarises the above information on where plants should and should not be planted at your school.

Area of school	Very large trees	Large trees	Small or medium trees	Palms	Shrubs or groundcover
On top of underground services	No	No	No	Yes Only if roots are not invasive	Yes
Emergency access areas	No	No	No	No	No
Below overhead wires	No	No	Yes Only if tree species will not grow to height of clearance zone around wires	Yes Only if palm species will not grow to height of clearance zone around wires	Yes Only if shrub species will not grow to height of clearance zone around wires
Greater than 30 m from a building	Yes	Yes	Yes	Yes	Yes
Less than 30 m but greater than 5 m from a building	Yes Only if root barrier used	Yes	Yes	Yes	Yes
Less than 10 m but greater than 5 m from a building	No	Yes Only if root barrier used	Yes	Yes	Yes
Less than 5 m but greater than 0.5 m from a building	No	No	Yes Only if root barrier used	Yes	Yes
Less than 0.5 m from a building	No	No	No	No	No
Within 2.5 m from a pathway	No	No	Yes Only if root barrier used and plants do not encroach onto path	Yes Only if roots are not invasive and plants do not encroach onto path	Yes If plants do not encroach onto path

## Bringing it together in a plan

When the planting requirements and other considerations have been defined, it is helpful to transfer these thoughts onto a plan. You will need an accurate site plan to scale, ideally showing all ground surfaces, drainage and slopes, underground and overhead services, buildings etc.

The below diagram demonstrates what such a plan might look like. The school representative body is encouraged to undertake landscaping in their schools. To avoid the disappointment of failed or poorly performing plants and their costly removal or replacement, schools are encouraged to seek skilled advice such as that from an experienced landscape architect or horticulturalist when planning their landscaping project.



## Related resources

Power and Water Corporation:

- allowable planting on water and sewer easements - <https://www.powerwater.com.au/customers/moving-and-building/easements-on-your-property/allowable-planting-on-water-and-sewer-easements>
- safety around trees and powerlines - <https://www.powerwater.com.au/customers/safety-and-emergencies/updates/trees-and-powerlines>

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